

Position paper

## **Rediscovering UCD4Development**

**By**

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### **Submitted for Panel ICT4D**

If permitted, discussion will be supported by following design based case studies,

1. Interface for mobile phone for low literacy levels
2. Meaningful applications of mobile telephony
3. ATM for low literacy levels
4. Railway ticket booking
5. Healthcare applications in rural areas

## **Rediscovering UDC4Development**

In developed countries, the shift to knowledge sector followed high degree of industrialization. However, in developing economies, knowledge sector is growing at very high pace and has almost overshadowed yet to be completed process of industrialization and development of traditional sectors. **How does ICT sustain itself when overall socio-economic developments are far behind? This is the real opportunity to use UCD to evolve a face of ICT that is unique and different from what has happened in developed economies.**

It is clear that the pace and the aggression with which knowledge sector is growing can be maintained only if it reaches the masses and that too beyond urban India. This aggression will ensure that ICT will reach remote rural areas faster than the pre-ICT technologies. Its power to influence development has been forcing planners to integrate ICT with national development plans quickly. For example, India has yet to ensure that electricity reaches all the villages (now planned to be completed by 2007), but is ready with plans for at least one broadband connection to every village by 2012! It is earlier than access to portable water and primary schools at reasonable distances!

Such rapid growth has its problems. The aggressive marketing push is most likely to use the easy-to-sell and commercially viable entertainment route. It is also likely to fall into the trap of Wan, broadband and Web access to villages and neglect more effective media like local radio stations run by people with local contents. From a larger development perspective, ICTs potentials need to be harnessed for more meaningful uses. It is possible if ICT takes the opportunity to widen its perspective of development and search for broader roles. Such a view of development is consistent with the ways these issues are viewed in the last three decades. From focus on economic parameters, 70s saw inclusion of social justice as a major criterion. The current UN Development Index is even more inclusive, more holistic and looks at development not just as an economic or technological issue but also as a social, cultural and lastly a political issue.

### **Developing Economies: Desperate Extremes and Opportunities**

Most developing economies also show simultaneous existence of desperate extremes on several dimensions. While parts of urban areas can boast contemporary infrastructure, there are other slum pockets and rural areas that are poor and resource starved. ICT has in fact added a new dimension of digital divide to this diversity (digital haves and have-nots). These extreme situations create interesting innovation opportunities. Developing economies like India are full of such diversities in economic, social, cultural, educational backgrounds as well as in living traditions.

If you look at it positively, this multi-dimensional plurality is in fact an opportunity for ICT innovation and a resource for UCD. In extreme situations, objects typically take a different hue when they appear in the different socio-economic context. Poor have access to telephone land lines as a 'public service', use mobile telephony as a 'family product' and watch DVDs as a 'community experience'. Once taught, poor prefer ATMs over normal banking, because they can hide their identities and lack of literacy from the educated bank staff and thus transcend the social barriers. Street hawkers see ATMs as a community safe, where they can deposit their meager daily

earnings at night and return home safely. **Arguments for accepting these new technologies can be strange, but meaningful and real.**

### **Challenge to UCD**

Most global companies are seriously looking at developing economies like China and India as a future market. They are beginning to understand these issues from their hard earned experience in these countries. MTV and other foreign TV channels, McDonalds and Kentuki chicken have learnt to address local cultures with greater sensitivity. However, hardcore product companies are slow in changing their products.

When you deal with cultures and socio-economic conditions that are so very different from the culture that gave birth to the products and devices, there are only two options available. First option is to force products on the culture through extensive advertising. This seems to work in urban rich and middle classes, where people anyway dream to ape the western lifestyle. The second option is re-building the product from the standpoint of the culture that you plan to address.

**I hope to prove that in developing economies and new cultures, as soon as one looks for markets beyond urban areas and wants to address the middle class in rural areas, the first option is just not viable. You have to rebuild the product respecting the sensibilities and preferences of the local cultures. There is no alternative to User Centered Design and Innovation in such situations. The products have to be re-conceptualized based on study of user's cognitive models as well as cultural needs.**

There are compelling reasons to re-conceptualize products. Just think about this. How would the population that has not even reached the functional literacy level use the opportunities offered by ICT? It has to deal with people who have never seen a computer, let alone touched it. This hardly means that literacy will be a barrier for adopting new technologies. Not very literate people like hawkers on streets and cab drivers have learnt to use ATMs and mobile phones. How do they learn and adjust to these products? This is a challenging situation for UCD and is worth pondering on. **I plan to present case studies of design of ATM, Mobile phone and Railway ticket booking interfaces to show how these products can be re-conceptulize ground-up to suit the literacy levels and cultural differences.**

To get acceptance in cultures, product interactions must understand the unique cognitive models of product operations. **I plan to show that UCD approach is the only viable approach to innovation.** You need local contents, directed to locals, in the language that they understand and identify with. You need a kind of ICT that the rural population can use, understand, maintain and sustain more or less on their own and with their limited skills. **All this means understanding locals and their capabilities.** There are examples, where people in the rural areas have managed to put up devices like cable TV antennas and connected PCOs to intercoms using local skills.

### **ICT but also .....**

There is a danger in see ICT as the only solution. Traditional issues like poverty alleviation and empowering people continues to be the primary goal of most

developing economies. There is a large backlog of infrastructure development like access to road network, electricity, water and now communication. At a family unit level priorities continue to be affordable shelter, food and clothing. More urgent are goals like empowering people by creating jobs, giving access to education and health-care. It is important to realize that ICT is a mixed blessing in some of these areas. ICT does create jobs, but these need a certain level of literacy and skills that are not always available, particularly in poorer sections of population that need to be gainfully employed with priority. Traditional technologies and even craft skills are able to bridge the gap more effectively than ICT. However, in areas like education, ICT does have an edge. ICT can 'bridge the distance' and can deliver 'schools' and 'motivated teachers' at a doorstep to ensure that boys and particularly girls do not drop out till they reach functional literacy level. **I believe that choice and focus will dictate ICTs success in development efforts and UCD will play a key role in that success.**

### **Researching for Opportunities: Techniques**

Cultural and literacy gaps make it difficult to use standard research techniques. Ethnographic techniques come closest, but to develop a rapport and break ice is not easy and requires simple and innovative techniques. Part of it involves carefully choosing the local partners to work with.

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